

ABSTRACT

This invention relates to a method and an apparatus for performing the method of inducing compressive residual stress along the surface of a part. In the preferred embodiment of the invention, the method includes
5 burnishing or deep rolling a surface using a first and a second roller or ball burnishing members, whereby the first and second burnishing members may have a different diameter and/or modulus of elasticity. In another preferred embodiment of the invention, the burnishing operations may be performed while the surface of the part is at different
10 temperatures.